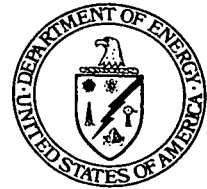




Department of Energy

Ohio Field Office Fernald Area Office

P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155



JUN 19 2000

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Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0730-00

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Mr. Bill Kurey
U.S. Fish and Wildlife Services - Suite H
6950 Parkway
Reynoldsburg, Ohio 43068

Mr. Mike Chezik
U.S. Department of Interior
Office of Environmental Policy and Compliance
U.S. Custom House, Rm 217
200 Chestnut Street
Philadelphia, Pennsylvania 19106

Dear Mr. Saric, Mr. Schneider, Mr. Kurey, and Mr. Chezik:

TRANSMITTAL OF DRAFT RESPONSES TO THE FERNALD NATURAL RESOURCE TRUSTEE COMMENTS ON THE DRAFT NATURAL RESOURCE RESTORATION DESIGN PLAN FOR AREA 8, PHASE II

- References:
- 1) Letter, J. Saric to J. Reising, "A8PII Natural Resource Restoration," dated February 2, 2000
 - 2) Letter, T. Schneider to J. Reising, "Comments - A8PII NRRDP," dated February 7, 2000

Mr. James A. Saric
Mr. Tom Schneider
Mr. Bill Kurey
Mr. Mike Chezik

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- 3) Letter DOE-0599-00, "J. Reising to J. Saric, T. Schneider, B. Kurey, M. Chezik, "Transmittal of the Final Natural Resource Restoration Design Plan for Area 8, Phase II," dated April 26, 2000

Enclosed for your review are draft responses to the Fernald Natural Resource Trustees (NRT) comments on the draft Natural Resource Restoration Design Plan (NRRDP) for Area 8, Phase II (A8PII). Approval of the NRRDP was received from the U.S. Environmental Protection Agency (U.S. EPA) per Reference 1. These comment responses were incorporated into the final NRRDP, which was transmitted per Reference 3.

If you have any questions regarding these comment responses or need further information, please contact Pete Yerace at (513) 648-3161.

Sincerely,



Jack R. Craig
Director

FEMP:Yerace

Enclosure

Mr. James A. Saric
Mr. Tom Schneider
Mr. Bill Kurey
Mr. Mike Chezik

-3-

JUN 19 2000

cc w/enclosure:

N. Hallein, EM-31/CLOV
G. Jablonowski, USEPA-V, SRF-5J
T. Schneider, OEPA-Dayton (three copies of enclosure)
F. Bell, ATSDR
M. Schupe, HSI GeoTrans
R. Vandegrift, ODH
F. Hodge, Tetra-Tech
M. Clawson, FCAB
K. Moore, FCAB
D. Sarno, FCAB
AR Coordinator, Fluor Fernald, Inc./78

cc w/o enclosure:

R. J. Janke, OH/FEMP
K. Nickle, OH/FEMP
J. Reising, OH/FEMP
E. Skintik, OH/FEMP
A. Tanner, OH/FEMP
P. Yerace, OH/FEMP
D. Carr, Fluor Fernald, Inc./2
J. Chiou, Fluor Fernald, Inc./52-0
T. Hagen, Fluor Fernald, Inc./65-2
J. Harmon, Fluor Fernald, Inc./90
S. Hinnefeld, Fluor Fernald, Inc./31
J. Homer, Fluor Fernald, Inc./65-2
M. Jewett, Fluor Fernald, Inc./52-2
T. Patton, Fluor Fernald, Inc./76
T. Walsh, Fluor Fernald, Inc./65-2
E. Woods, Fluor Fernald, Inc./65-2
ECDC, Fluor Fernald, Inc./52-7

**DRAFT RESPONSES TO THE FERNALD NATURAL RESOURCE TRUSTEES COMMENTS
ON THE DRAFT AREA 8, PHASE II NATURAL RESOURCE RESTORATION DESIGN PLAN
(21100-PL-0001, REVISION A)**

U.S. FISH AND WILDLIFE SERVICES

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 1.1

Pg #: 1

Line #: 26

Code:

Original Comment #: 1

Comment: The "vernal pools" which are a kind of wetland, would perhaps be more appropriately called wetlands in the design plan. It is by no means certain that the proposed wetlands will develop the characteristics of vernal pools, but they may become wetland. Because "all of the soils are well drained and considered poorly suited for wetland establishment," it is unlikely that a high-quality wetland or vernal pool will develop very soon, if ever.

Response: Agree. The features discussed on Page 1, Line 26 were originally termed "ponds and filter wetlands." The name of these features was changed to "vernal pool" because of possible regulatory complications arising from the perception that these features would be considered a treatment system. These concerns appear to be unfounded, and the features will be re-labeled as Ponds and Filter Wetland.

Action: Rename the "vernal pool" first discussed on Page 1, Line 26 to "ponds and filter wetland" throughout the document.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 2.3.3.1 through 2.3.3.4

Pg #: 10

Line #:

Code:

Original Comment #: 2

Comment: These sections should discuss the pattern of planting for the saplings and seedlings. Will they be evenly spaced or clumped? How will the planting points be decided? How will the species interspersions be determined? Will there be any pure stands? Also, what equipment and techniques will be used to plant the trees, saplings, shrubs, and grasses, (i.e. please list the motorized equipment, shovels/planting bars, tractors, trailers, watering equipment, etc.), and how will they be used.

Response: Some of the information requested is found Section 4.2.5 and in Appendix A, the Area 8, Phase II (A8PII) Natural Resource Restoration Design Plan (NRRDP) Planting Specifications. Additional detail will be provided in a new Planting Plan (Appendix B). This document will address all questions unanswered in the text and Appendix A. Appendix B will include "patch pages" for each habitat patch to be planted in A8PII.

Action: Add Appendix B to this A8PII NRRDP and more fully reference Appendices A and B in Sections 2.3.3.1 through 2.3.3.4.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 3.1.2

Pg #: 13

Line #: 24

Code:

Original Comment #: 3

Comment: The Road Construction Section mentions a "400 foot access road." However, the figures don't show any access roads that are 400 feet long. Please correct either the text or the figures that depict A8PIL.

Response: Agree. The 400-foot length is the approximate extent of the entire turnaround area shown on Figures 2 through 4.

Action: Label Figures 2 through 4 accordingly.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 3.2

Pg #: 14

Line #: 4

Code:

Original Comment #: 4

Comment: The materials handling area is supposed to be about 4 acres, but Figure 2 does not clearly indicate the extent of the area. Please indicate more clearly the extent of the materials handling area in Figure 2. This section should also document the need for woodchips and tell how they will be used. How will the wood chips be applied?

Response: Figure 2 will be labeled more clearly. Additional details regarding the application of woodchips will be found in Appendices A and B.

Action: Add the following sentence after "Figure 2" on Page 14, Line 4:

"Woodchips will be used primarily as mulch cover for all plants, trees, shrubs and seedlings."

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 3.3

Pg #: 14

Line #:

Code:

Original Comment #: 5

Comment: This section should be titled "Additional Wetland," please see Comment Number 1 above. By calling these ponds "additional" the existence of other ponds is implied. Where are the other ponds? Also, there is a need for more construction detail of the "vernal ponds" and a discussion of how they will be maintained, vegetated, and operated.

Response: Agree. See response to USFWS Comment 1 above.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 3.3

Pg #: 14

Line #: 26

Code:

Original Comment #: 6

Comment: There may be an arithmetic error in this sentence. Forty cubic yards seems a bit much for a 10-foot diameter hole that is 3 feet deep. About 9 cubic yards?

Response: The volume was calculated based on a 3-foot deep, 10-foot wide basin diameter, with side slopes at a 3:1 angle. Therefore, the surface diameter is actually about 28 feet wide. These dimensions result in a displacement volume of approximately 40 cubic yards.

Action: Add the following text after "Depression" on Page 14, Line 26:

"with 3:1 side slopes."

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 3.4.1

Pg #: 15

Line #: 8

Code:

Original Comment #: 7

Comment: Please remove "DOE and other" and start the sentence with "The Trustees." DOE is a trustee and the current wording is redundant.

Response: Agree.

Action: Revise text accordingly throughout the document.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 3.4.2

Pg #: 15

Line #:

Code:

Original Comment #: 8

Comment: If the topsoil in the drainage swales and the "vernal pools" will be replaced, it should be replaced with wetland (hydric) soil. This is necessary so that the wetland soil seed bed can germinate and vegetate these wetlands. We suggest that the clean wetland soils from the trap range area be stockpiled for use in these and other on-site wetland restorations.

Response: Hydric topsoil will be used in the vernal pool, if it is available. However, the timing of certification for the trap range and the amount of hydric soil that is actually available is uncertain.

Action: Add the following statement after "pools" on Page 15, Line 19:

"Hydric soil from the trap range will be imported to A8P11, if it is available."

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 4.1.1

Pg #: 16

Line #:

Code:

Original Comment #: 9

Comment: Soil amendments should be used as necessary. We understand that information about appropriate soil amendments is readily available from the Ohio Division of Forestry.

Response: A8P11 soil sampling confirmed the need for lime application in the patches that represent the oak maple forest. No other amendments will be required, since adequate topsoil is present throughout the remainder of planted areas in A8P11.

Action: Revised Section 4.1.1. to state that lime will be applied to the oak-maple patches.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 4.1.7

Pg #: 17

Line #:

Code:

Original Comment #: 10

Comment: Although erosion control for the 5 cow paths is addressed in this section, the 2 ditches that enter Paddys Run through A8P11 aren't mentioned. Will these ditches require hardening to prevent head cutting? What techniques will be used?

108. 2

Response: DOE has decided that the two ditches are of sufficiently small streamflow volume that no erosion control measures are necessary. Additional erosion within the existing riparian forest is acceptable.

Action: None required.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 4.1.8

Pg #: 18

Line #:

Code:

Original Comment #: 11

Comment: Again, the title of this section is misleading, see Comment Number 1 above. The primary purpose of these ponds is to act as sediment traps for the materials handling area. Will there be any restoration of the pools after the materials handling area is removed from service? Also, Line 7 should specify the table which contains the native grass mix to be used in the pool areas.

Response: Agree. See response to USFWS Comment 1 above.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 4.2.3

Pg #: 19

Line #:

Code:

Original Comment #: 12

Comment: The planting sequence would seem to be more appropriate if the erosion control was conducted prior to the general planting. This would have the advantage of not driving through the site restoration vegetation in order to get to the more distant erosion control areas near Paddys Run. Also, the successful planting of the dormant erosion control plants requires cold weather.

Response: Agree.

Action: Revise Section 4.2.3 to show that erosion control work will occur before other planting efforts.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 4.2.7

Pg #: 20

Line #: 32

Code:

Original Comment #: 13

Comment: What kind of seed will be planted in the "small grassland strip?" Are there forbs in the seed mix? If not, why not?

Response: The small grassland strip will be planted with the seed mix listed on Table 8. All A8PII seed mixes will be modified to include forbs.

Action: Revised text and Tables 8 through 10 accordingly.

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Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 5.1.1.1

Pg #: 23

Line #: 8

Code:

Original Comment #: 14

Comment: Replacement plants should be brought back to 100% of the original number planted. If they are brought back to 80% and even one more plant dies, then you have to replant. With 100% replacement you can be more confident of achieving the 80% goal even with some mortality. If there is a very large mortality, there should be a review to determine the cause.

Response: DOE will ensure 80 percent survival. We will continue to replant to bring number to 80 percent.

Action: None required.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #:

Pg #:

Line #:

Code:

Original Comment #: 15

Comment: We saw no information on the use of mycorrhizal fungi inoculation of tree roots in A8PII. If the use of this material is anticipated, please indicate the details of the source and use in the design plan. We understand this material greatly enhances tree survival and growth, especially in unproductive soils.

Response: The use of mycorrhizal fungi will be implemented for all plantings and seeding conducted in A8PII. Specific methods of application will be addressed in Appendices A and B.

Action: Revise text and Appendices A and B accordingly.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 5.1.1.2

Pg #: 23

Line #:

Code:

Original Comment #: 16

Comment: How will the need for maintenance burning of the native grasses be determined? Under what conditions will the grasses be burned? What precautions will be taken to prevent the spread of the fire? Will there be a fire management plan developed?

Response: A burn plan will be developed for the A8PII savanna addressing all aspects of on-site burn maintenance. The burn plan will not be included in the revised NRRDP, but rather committed to by August 1, 2000.

Action: Add the following sentence after "(Packard 1997)" on Page 26, Line 16:

"A burn plan will be developed for A8PII and will be submitted to the NRTs by August 1, 2000." With the recent issues that DOE is addressing at other sites regarding controlled burns, DOE cannot commit to performing controlled burns until further evaluation is conducted. The "burn plan" will address these issues.

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Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: 5.2.4

Pg #: 26

Line #: 30-31

Code:

Original Comment #: 17

Comment: Arrangements for the perpetual maintenance of the "savannas," prairies, and native grasses should be arranged in perpetuity before FEMP restoration is complete. If these grassland communities can't be maintained they will cease to exist. If they cease to exist the funds expended on their creation will have been wasted and the public will not have been compensated. Long term maintenance must be part of the settlement.

Response: DOE can not commit to Ecosystem maintenance of the FEMP past its control of the site. It is anticipated that some other management agency or private organization will assume management and control of the FEMP site once DOE's mission is completed. DOE will work with successor agency to ensure that management expectations are planned for in the future.

Action: None required.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: Table 8

Pg #:

Line #:

Code:

Original Comment #: 18

Comment: Please include some forbs in the seed mix.

Response: Agree. See response to USFWS Comment 13 above.

Action: Revise Tables 8 through 10 accordingly.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #: Appendix A

Pg #:

Line #:

Code:

Original Comment #: 19

Comment: Appendix A would be an appropriate place to discuss the use of micorrhizal fungi tree root inoculation.

Response: Agree. See response to Comment 15 above.

Action: Revise text and Appendices A and B accordingly.

Commenting Organization: Fernald Trustees

Commentor: FWS

Section #:

Pg #:

Line #:

Code:

Original Comment #: 20

Comment: Please add a section on patches to the design plan.

Response: Agree. See response to USFWS Comment 2 above.

Action: Add Appendix B accordingly.

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OHIO ENVIRONMENTAL PROTECTION AGENCY

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #:

Pg #:

Line #:

Code: M

Original Comment #: 1

Comment: This project is a demonstration project, that is it is a demonstration not only of the specifics of restoring (revegetating) the site, but also of the process of involvement of the trustees in approval of the designs. As a demonstration of the process, this project has failed. In October of 1998 meetings were held on site at which inspection of the area was made and consensus was reached on the concept of the revegetation of this area. It is unacceptable that it has taken this long to get a design plan to the trustees. Planting of this area should have taken place during the Fall of 1999 at the latest. It appears as though the Department of Energy internal review process is thwarting the progress of site restoration. It is the trustees that have approval authority for the NRRDP as indicated in this plan (Section 3.4.1 and Section 4.2.1). In October of 1998 the trustees were in agreement of the design as discussed and 14 months later a design is formally submitted for approval. These time frames are not acceptable.

Response: DOE agrees that the review and approval process for NRRDPs can be improved and expedited over the A8PII process. DOE has made adjustments in its oversight process for natural resource activities that will result in faster, more efficient design reviews and project implementation. DOE is committed to ensuring that the design process on natural resource restoration projects is improved. DOE will monitor the process and make further adjustments if necessary.

Action: DOE will continue to monitor the design process for natural resource restoration projects and make further adjustments to the DOE oversight process if warranted.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #:

Pg #:

Line #:

Code: C

Original Comment #: 2

Comment: The document needs to include the patch pages that were included in the partial design provided to the trustees at the October 21, 1999 meeting.

Response: Agree. See response to USFWS Comment 2 above.

Action: Add Appendix B accordingly.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #:

Pg #:

Line #:

Code: C

Original Comment #: 3

Comment: Renaming what was referred to as "pond" and "filter wetland" in the October 21, 1999 version to "vernal pools" in the current version is unacceptable. The renaming shows a lack of understanding in the functional differences between these aspects of the design. Revise the document to the original names. Vernal pools do not function to "remove organic material from the surface water runoff." Vernal pools are areas where water temporarily pools during the winter and spring. They are located in wooded areas and provide unique breeding habitat for amphibians and macroinvertebrates. Due to their location in woods they generally have a high organic content substrate due to accumulated leaf litter.

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Filter wetland and ponds on the other hand accurately describe the function of those portions of the design. Should insufficient water be generated off the material handling area to support them as ponds and a filter wetland, then need for that function is gone and they will revert to grassland vegetation.

Response: Agree. See response to USFWS Comment 1 above.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 2.1

Pg #:

Line #:

Code: C

Original Comment #: 4

Comment: As stated in Ohio EPA's October 28, 1999 comments on the design, additional details regarding the operation of the material handling area should be provided.

Response: Additional detail regarding the material handling area is provided in Section 3.2.

Action: None required.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 2.3.3

Pg #:

Line #:

Code: C

Original Comment #: 5

Comment: We disagree with the position that the planting density proposed reaches the desired density for forest planting. Additionally, we do not believe the A1PI design nor the A8PI Reforestation research supports the proposed planting density. However, since this a demonstration project, we will accept the proposed densities in an attempt to assess the success of this planting density.

Response: Comment acknowledged.

Action: None required.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 2.3.3.3

Pg #:

Line #:

Code: C

Original Comment #: 6

Comment: The section references the concept of research concerning various planting/protection methods. The original plan for A8PII was a demonstration forest a function of which would be research. Additional detail should be provided within a research plan for evaluating the ideas presented in this section. The research plan should be included as an appendix to this design package.

Response: A research plan will be developed and included as Appendix C to the NRRDP.

Action: Add the following text after "Repellents" on Page 11, Line 5:

"A research plan for A8PII is included as Appendix C to this NRRDP."

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Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 2.3.4

Pg #:

Line #:

Code: C

Original Comment #: 7

Comment: In addition to the grass seed mixture proposed for the disturbed areas, the trustees believe a forb component is necessary. The proposed savanna mixture would be appropriate for all disturbed areas.

Response: Forbs will be added to all seed mixes in A8PII. See responses to USFWS Comment 13 above.

Action: Revise Tables 8 through 10 accordingly.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 2.3.5

Pg #:

Line #:

Code: C

Original Comment #: 8

Comment: The purpose of this section is unclear and not well supported. The section does not provide benefit to the document and should be deleted.

Response: Agree.

Action: Delete Section 2.3.5.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 3.0

Pg #:

Line #:

Code: C

Original Comment #: 9

Comment: The grading plan should include requirements for clay lining of the ponds, filter wetland and vernal pool. A minimum of six inches of in situ or trucked in clay should be compacted to provide appropriate water retention. OSDF clay screen reject material would be appropriate for liner construction. Additionally, following certification sampling, hydric soils should be collected from the area of the former trap range and used as a vegetative layer in the ponds, filter wetland and vernal pool.

Ohio EPA will provide inoculum pond muck similar to that used in the A1PI wetland project. These materials successfully provided a boost to the macroinvertebrate population and vegetative community in the wetland project.

Response: Clay will either be obtained with in A8PII or from the OSDF clay screen reject material.

Action: Add the following after "features" on Page 14, Line 17:

"Six inches of clay will be compacted and used to line the drainage swales, ponds, and wetlands."

After "yards" on Page 14, Line 27, add the following:

"The pool will be designed to hold water, so clay may need to be imported to form a liner."

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Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 3.1

Pg #:

Line #:

Code: C

Original Comment #: 10

Comment: Figure 3 does not show the access road very well. Figure 2 probably provides the best view but lacks a label.

Response: Agree.

Action: Revise figures accordingly.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 3.3

Pg #:

Line #:

Code: C

Original Comment #: 11

Comment: The vernal pool should be an elliptical shape approximately 30' long and 15" wide. Depth should vary from 1' to 4'. It is unclear from Figure 3 the proposed location but the pool should be located within the existing wooded riparian areas. A tree top/branches from removed trees should be placed within the completed pool to provide habitat. Buttonbush shrubs should be planted adjacent to the pool.

Response: Agree. DOE suggests that the NRTs assist in determining the placement and configuration of the vernal pool in the field.

Action: Revise Section 3.3 to state that the NRTs will determine the exact location of the pool in the field. Also, add buttonbush shrubs to whichever patches the vernal pool is located within.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 3.4.3

Pg #:

Line #:

Code: C

Original Comment #: 12

Comment: The scheduling proposed for seeding is unclear. Permanent seeding should be completed in the Spring of 2000 in all possible areas. Straw mulch should be certified as weed free. The research results from the A1PI prairie revegetation strongly support the use of weed free straw.

Response: Agree. The interim seeding described in this section was in anticipation of construction commencing in the Fall of 1999. The permanent seed mix listed on Tables 8 and 10 will be used as appropriate in all disturbed areas following construction.

Action: Revise Section 3.4.3 accordingly.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 4.1.1

Pg #:

Line #:

Code: C

Original Comment #: 13

Comment: It appears necessary that soil amendments be applied in this area. Recommended amendments include lime for pH buffering and wood chips to reduce nutrient load.

Response: Agree. See response to USFWS Comment 9 above.

Action: See action for USFWS Comment 9 above.

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Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 4.1.1

Pg #:

Line #:

Code: C

Original Comment #: 14

Comment: Decisions regarding where and what soil amendments will be used must be made during the design process. This should not be a field call. Appropriate predesign sampling and assessments should be made to support a decision for soil amendment.

Response: Agree. See response to USFWS Comment 9 above.

Action: See action for USFWS Comment 3 above.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 4.1.8

Pg #:

Line #:

Code: C

Original Comment #: 15

Comment: The filter wetland and ponds should receive dormant root plantings or plugs to provide a jump start to filtering capacity and invasive control. Plants that seemed to transplant well in Ohio EPA's innoculum work in A1PI include *Iris versicolor*, *Sparganium eurocarpum*, and *Eleocharis* spp.

Response: Agree. DOE proposes to plant the following plugs on 2-foot centers: bottlebrush sedge (*Carex lurida*), awl-fruited sedge (*Carex stipata*), fox sedge (*Carex vulpinoidea*), Joe pye weed (*Eupatorium maculatum*), Soft Rush (*Juncus effusus*), cardinal flower (*Lobelia cardinalis*), great blue lobelia (*Lobelia siphilitica*), dark green bulrush (*Scirpus atrovirens*), and woolgrass (*Scirpus cyperinus*).

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 4.2.3

Pg #:

Line #:

Code: C

Original Comment #: 16

Comment: Completing erosion control work after planting is complete seems inappropriate. The likelihood of damage to planted stock seems high depending on how materials will be transported to the creek banks. It is recommended that erosion control work begin early so that heavy equipment from the earthwork might be utilized if necessary. Additionally, dormant cutting should be planted as early in the year as practical. Doing erosion control concurrently with material handling area earthwork seems most appropriate.

Response: Agree. See response to USFWS Comment 12 above.

Action: See action for USFWS Comment 12 above.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 4.2.5

Pg #:

Line #:

Code: C

Original Comment #: 17

Comment: Seeding with the forb/grass mixture should be completed within the 70' perimeter of the air monitor.

Response: Agree.

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Action: Add the following text after "trees" on Page 20, Line 10:

"This area will be seeded with the native grass/forb mix listed in Table 9.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 5.1

Pg #:

Line #:

Code: C

Original Comment #: 18

Comment: A clear and accepted definition of survival for planted stock is necessary. Recommended language comes from the "State of Ohio Department of Transportation Construction and Materials Specifications." The following definition is proposed "Plants which have died back into the crown or beyond a normal pruning line shall be considered dead."

Response: This definition of "dead" is acceptable to DOE. However, the definition may still be difficult to interpret in all cases in the field if only a portion of the plant "dies back into the crown or beyond the normal pruning line." DOE proposes to expand the definition to include the statement that "...a majority of the plant (i.e., greater than 50 percent of the plant) dies back into the crown.."

Action: DOE will revise the definition for survival of planted stock in the design based on the language in the response above.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 5.1.1

Pg #:

Line #:

Code: C

Original Comment #: 19

Comment: Three years is an insufficient amount of time to monitor the success of planting. A minimum of 10 years of monitoring for survival and growth is necessary. In addition to survival parameters monitored should include tip growth, DBH, and fruit production. Monitoring of these parameters could be conducted on a statistically significant, random subset of the plantings.

Response: DOE views monitoring of A8P11 as a two-phase process. The first phase, which would last three years, will only determine whether or not the planting effort was a success. Discussions with several nursery professionals have revealed that three years is sufficient time for transplanted trees and shrubs to become established. The second phase, which as proposed would last an additional six years, will qualitatively evaluate the advancement of the community through the parameters listed above (tip growth, DBH, fruit production). In addition, qualitative observations of seed propagation, volunteer recruitment, and wildlife use will be made. The NRRDP proposes that this monitoring occur in years 2005, 2007, and 2009. DOE will revise this second phase of monitoring so that it is conducted annually for seven years. Therefore, tree/shrub survival and establishment will be the focus of monitoring in years One to Three (with an 80 percent survival requirement), while plant growth and community development will be the focus of years Four to Ten. DOE agrees that statistically significant subsamples should be utilized in A8P11.

Action: Revise Section 5.1.2 to add a fourth monitoring event in 2011.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 5.1.1

Pg #:

Line #:

Code: C

Original Comment #: 20

Comment: The document should define the start/stop date for each year's monitoring. If the report is to be submitted August 1, when will monitoring be completed to support the report. Monitoring would seem more appropriately completed on a growing season basis (e.g., report submitted in November/December with monitoring through October).

Response: Annual monitoring of trees and shrubs will be conducted in June of each year, with results submitted by August 1. The rationale for this approach is as follows: All trees will have buds and leaves by June, allowing for easy identification of dead plants. If a plant dies later in the growing season, it will be recorded in the following June. By monitoring in the same month of each year, growth parameters can be easily tracked. This approach also allows for monitoring to take place in the summer months between planting activities, thereby avoiding competition of resources.

Action: Revise Section 5.1.1 to describe how monitoring will be conducted in June of each year.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 5.1.1.1

Pg #:

Line #:

Code: C

Original Comment #: 21

Comment: The trustees support the proposed research into deer impacts, however it is unacceptable to not replace stock lost below the 80% criteria. Replacement costs/success are a necessary component of any research for developing preferred management techniques.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 5.1.1.1

Pg #:

Line #:

Code: C

Original Comment #: 22

Comment: The 80% criteria should apply to species as well as plots. If over 20% of any given species dies then replacement should occur.

Response: It is DOE's position that replacement planting will only occur if more than 20 percent die in any plot. If replacement planting is required and a particular species is impacted more than others, that will be taken into consideration when replacement plants are ordered.

Action: None required.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 5.1.1.1

Pg #:

Line #:

Code: C

Original Comment #: 23

Comment: Replacement to more than 80% is needed to prevent remobilization for additional replacement activities. Considering the low planting densities being utilized in this project, replacement to a minimum of 90% is necessary.

Response: Only replace above 80 percent.

Action: See action for USFWS Comment 14 above.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 5.1.1.2

Pg #:

Line #:

Code: C

Original Comment #: 24

Comment: Change section title to "Grasses & Forbs." Coverage is needed from the standpoint of erosion control as well as for restoration success. Immediate cover is necessary for erosion control. Whereas 90% cover by permanent grasses and forbs would not be expected by the end of the first year but by the end of the second growing season. Therefore the use of two monitoring periods, one for cover crop coverage and another for permanent perennial grasses and forbs is necessary.

Response: Agree. See response to USFWS Comment 13 above.

Action: See action for USFWS Comment 13 above.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 5.1.1.3

Pg #:

Line #:

Code: C

Original Comment #: 25

Comment: Add Typha spp. to the list of aggressive species requiring annual control.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 5.2.1

Pg #:

Line #:

Code: C

Original Comment #: 26

Comment: A method for documenting watering activities should be developed in order to address issues relating to watering adequacy. A more formalize documentation of watering and other management activities will allow for better project evaluations and lessons learned transfer between projects.

Response: Agree. This information will be provided in the new Appendix B to the NRRDP. See response to USFWS Comment 2 above.

Action: See action for USFWS Comment 2 above.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 5.2.4

Pg #:

Line #:

Code: C

Original Comment #: 27

Comment: A burn plan for the savanna should be submitted to the trustees during the summer of 2000 for implementation in the spring of 2001 if sufficient fuel load is available to support a burn.

Response: Agree. See response to USFWS Comment 16 above.

Action: See action for USFWS Comment 16 above.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: Table 8

Pg #:

Line #:

Code: C

Original Comment #: 28

Comment: As stated in previous comments, inclusion of forbs into the proposed seed mix is necessary.

Response: Agree. See response to USFWS Comment 13 above.

Action: See action for USFWS Comment 13 above.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: Table 10

Pg #:

Line #:

Code: C

Original Comment #: 29

Comment: Add cardinal flower and great blue lobelia to the proposed seed mix.

Response: Agree.

Action: Revise Table 10 accordingly.

Commenting Organization: Fernald Trustees

Commentor: OFFO

Section #: 2.3.4

Pg #:

Line #:

Code: C

Original Comment #: 30

Comment: Recommend that the use of legume forbs should be maximized. These forbs will serve as nitrogen fixers in the prairie ecosystems.

Response: Agree. Legume forbs will be added to Tables 8 through 10.

Action: Revise Tables 8 through 10 accordingly.

U.S. DEPARTMENT OF ENERGY

Commenting Organization: Fernald Trustees

Section #: 1.2.1

Pg #: 2

Line #: 18-20

Commentor: DOE

Code:

Original Comment #: 1

Comment: Replace "This ditch" with "Both ditches" and move sentence to the end of the paragraph.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Section #: 1.2.1

Pg #: 2

Line #: 22

Commentor: DOE

Code:

Original Comment #: 2

Comment: Add "northern most" between "the" and "drainage."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Section #: 1.2.1

Pg #: 2

Line #: 28

Commentor: DOE

Code:

Original Comment #: 3

Comment: Replace "something" with "a flood event."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Section #: 1.2.2

Pg #: 2

Line #: 31

Commentor: DOE

Code:

Original Comment #: 4

Comment: Replace "the site" with "A8PIL."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Section #: 1.2.2

Pg #: 3

Line #: 12

Commentor: DOE

Code:

Original Comment #: 5

Comment: Add "wild grape" before "boxelder."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 1.2.3

Pg #: 3

Line #: 24

Code:

Original Comment #: 6

Comment: Add "wetland and" between "the" and "vernal pool."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 1.2.5

Pg #: 4

Line #:

Code:

Original Comment #: 7

Comment: The design should include a more detailed discussion of the baseline habitat present in A8PII. This baseline should be used for comparison purposes during future monitoring events.

Response: Agree. The 1990 Miami University Wildlife Descriptions will be added to Section 1.2.5.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 1.4

Pg #: 5

Line #:

Code:

Original Comment #: 8

Comment: This section should acknowledge that a multi-use forest is one of the goals for the restoration of A8PII. The multi-use forest will provide a very diverse wildlife habitat in the early and mid stages of succession.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 1.4

Pg #: 5

Line #: 16

Code:

Original Comment #: 9

Comment: Replace "projects across the FEMP" with "of A8PIII."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 2.1

Pg #: 6

Line #: 8

Code:

Original Comment #: 10

Comment: Add "and other organic material" between "woodchips" and "Generated," to ensure consistency with other sections of the design.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees
 Section #: 2.2 Pg #: 6 Line #: 24 Commentor: DOE
 Original Comment #: 11
 Comment: Add "and the installation of a wetland and vernal pool" after "corridor."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees
 Section #: 2.2.2 Pg #: 8 Line #: Commentor: DOE
 Original Comment #: 12
 Comment: The design should acknowledge that oak savannas are some of the most endangered ecosystems in the nation. A reference should be made to the U.S. EPA oak savanna website.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees
 Section #: 2.3.2 Pg #: 9 Line #: 23-24 Commentor: DOE
 Original Comment #: 13
 Comment: Replace "Ohio Environmental Protection Agency" with "Natural Resource Trustees."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees
 Section #: 2.3.3 Pg #: 9 Line #: Commentor: DOE
 Original Comment #: 14
 Comment: Enhance this discussion to acknowledge that a multi use forest is one of the benefits of this restoration approach.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees
 Section #: 2.3.3.3 Pg #: 11 Line #: 5 Commentor: DOE
 Original Comment #: 15
 Comment: Remove "of exclusion fencing and"

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 2.3.5

Pg #: 11

Line #:

Code:

Original Comment #: 16

Comment: Delete or enhance this section. For instance, add information regarding when, how, and what type of volunteer species would be expected within an area.

Response: Agree. See response to OEPA Comment 8 above.

Action: See action for OEPA Comment 8 above.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 3.1

Pg #: 13

Line #: 12

Code:

Original Comment #: 17

Comment: Replace "other FEMP restoration projects" with "A8PIII restoration project."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 3.1

Pg #: 13

Line #:

Code:

Original Comment #: 18

Comment: Please verify that the volumes and other dimensions estimated in this section are accurate.

Response: Agree.

Action: Revise text as needed.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 3.2.1

Pg #: 14

Line #: 15

Code:

Original Comment #: 19

Comment: Replace "shallower third pool that is designed to filter out suspended organic matter" with "shallow wetland."

Response: Agree.

Action: Revise text as needed.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 3.4

Pg #: 14

Line #: 32

Code:

Original Comment #: 20

Comment: Replace "the fall" with "early spring."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 3.4.1

Pg #: 15

Line #: 8

Code:

Original Comment #: 21

Comment: Replace "DOE and the other Trustees" with "The Natural Resource Trustees."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 3.4.2

Pg #: 15

Line #: 15

Code:

Original Comment #: 22

Comment: Remove the last sentence of this paragraph.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 4.1.1

Pg #: 16

Line #:

Code:

Original Comment #: 23

Comment: It was stated in Section 4.1.1 of the NRRDP that lime may be required in one portion of A8PII. Please revise this section to clarify the use of soil amendments in A8PII.

Response: Agree. See response to USFWS Comment 9 above.

Action: See action for USFWS Comment 9 above.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 4.2

Pg #: 18

Line #:

Code:

Original Comment #: 24

Comment: The possibility of delays and substitutions due to availability further emphasizes the need for nursery BOAs and other mechanisms for contract growing.

Response: Agree.

Action: None required.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 4.2.3

Pg #: 19

Line #: 11

Code:

Original Comment #: 25

Comment: Remove "In other words."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 4.2.4

Pg #: 19

Line #:

Code:

Original Comment #: 26

Comment: The possibility of delays and substitutions due to availability further emphasizes the need for nursery BOAs and other mechanisms for contract growing.

Response: Agree.

Action: None required.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 5.1

Pg #: 22

Line #:

Code:

Original Comment #: 27

Comment: Quantitative monitoring will be needed to evaluate seedling growth. At a minimum, caliper readings and tip growth should be included in the monitoring plans.

Response: Agree to take a representative sample, not measure every seedling.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 5.1.1

Pg #: 22

Line #: 19

Code:

Original Comment #: 28

Comment: Replace "accelerate the natural succession process" with "the development of a multi-use habitat to support habitat quality enhancement.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 5.1.1.3

Pg #: 23

Line #:

Code:

Original Comment #: 29

Comment: Wild grape has the potential to regenerate up to eight years after it has been cut or removed. This should be considered in the monitoring plans.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 5.1.2

Pg #: 24

Line #: 4-5

Code:

Original Comment #: 30

Comment: The monitoring period should be extended from six years to 10 years. The monitoring dates currently in the NRRDP should be replaced with the fourth, sixth, eighth, and tenth years.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 5.1.2.1

Pg #: 24

Line #: 20

Code:

Original Comment #: 31

Comment: The monitoring dates currently in the NRRDP should be replaced with the fourth, sixth, eighth, and tenth years.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 5.1.2.3

Pg #: 25

Line #:

Code:

Original Comment #: 32

Comment: Wildlife use should be compared to the baseline survey of the area in order to qualitatively assess the use of the area as habitat.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 5.2.2.1

Pg #: 25

Line #: 31

Code:

Original Comment #: 33

Comment: Remove "All."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 5.2.4

Pg #: 26

Line #:

Code:

Original Comment #: 34

Comment: The potential for a management commitment past 2008 should be acknowledged in the design. The NRTs are interested in the prairies being managed past 2008.

Response: See response to USFWS Comment 17 above.

Action: None required.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: 6.2

Pg #: 28

Line #:

Code:

Original Comment #: 35

Comment: Ensure that mulch piles are managed so as to minimize fire hazards.

Response: Agree.

Action: None required.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #: Table 6

Pg #:

Line #:

Code:

Original Comment #: 36

Comment: Ensure that the Buffer plantings are adequately protected from deer depredation and browsing impacts.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Fernald Trustees

Commentor: DOE

Section #:

Pg #:

Line #:

Code:

Original Comment #: 37

Comment: A sign should be installed that acknowledges the work of the Trustees in the A8PII ecological restoration.

Response: Agree.

Action: Revise text accordingly.